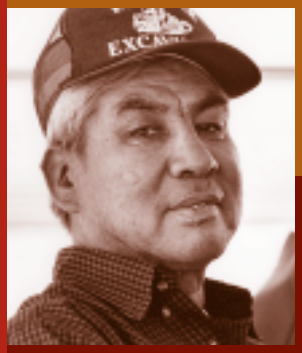
A COORDINATED PLAN TO HELP GUIDE *our work in diabetes*



2003-2007

CALIFORNIA'S *plan for diabetes*

DEVELOPED BY THE DIABETES IN CALIFORNIA TASK FORCE

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"There are risks and costs to a program of action. But they are far less than the long range risks and costs of comfortable inaction."

— John F. Kennedy

Summary

Diabetes, a serious disease and major public health problem, is sweeping the country. California has approximately two million people with diabetes and a growing number with pre-diabetes. Many excellent programs and initiatives exist in California to address diabetes, but with major budget challenges and an exploding epidemic, it is essential that we work together to coordinate efforts and leverage our impact on this devastating disease.

California's Plan for Diabetes (the Plan) was developed to help organizations in their work to combat diabetes. The Plan belongs to the people of California, as we are all impacted by diabetes. Many people throughout the state contributed to the development of the Plan. Initially, a multi-disciplinary group came together to identify broad topics or goals needed to be achieved in diabetes. Within each goal we identified priority areas, recommended interventions, and expected outcomes when the interventions are implemented. Importantly, we also suggested measurement or evaluation tools that could be used to monitor progress and determine when we have achieved our goals. When a draft of the Plan was complete, we posted it on the Internet and took it on the road to gather input at ten community meetings held in cities throughout California. We wanted this five-year plan to be realistic and achievable, and serve as a useable guide for work in diabetes. Therefore, we did not address every problem or concern in diabetes.

"Diabetes is like a tsunami wave that has been developing force and is crashing down on California."

The Plan serves three primary purposes. First, it assists state and local organizations in meeting national objectives for diabetes, as defined by such initiatives as Healthy People 2010 and the National Diabetes Objectives established by the Centers for Disease Control and Prevention. Second, the Plan is meant to guide organizations in their chosen activities insofar as they address diabetes as a major health concern in California. Finally, the Plan promotes collaboration between organizations in order to strengthen their combined efforts in addressing diabetes.

Introduction

The impact of diabetes in California

Diabetes Mellitus (diabetes) is a prevalent and serious public health concern, which has grown so rapidly in recent years that representatives of the federal government call the disease "a national epidemic[1]." The disease affects more than 17 million people nationwide, and approximately two million people have diabetes in the state of California[2]. In the 1990s, the prevalence of type 2 diabetes in California increased by 33 percent overall, and 70 percent among people in their 30s[3]. The total number of people with diabetes in California is expected to double by the year 2020[4].

In addition to being the sixth leading cause of death in the United States[5], diabetes contributes to the serious effects of other conditions. Diabetes is the leading cause of major medical problems, including adult blindness, kidney failure, non-traumatic amputation of the lower limbs, and is a significant contributor to heart disease and stroke. Furthermore, serious birth defects may occur in the offspring of mothers with diabetes. All of these complications compromise people's quality of life, affect their ability to contribute to their communities and cost great amounts to manage and treat. Spending in the United States for diabetes was over $100 billion in 1992, or $10,071 per person with diabetes, compared to $2,699 per person without diabetes[6]. California's share of this cost was approximately $12 billion from all sources. Although California's estimate is enormous, it is probably a conservative one because lost wages, productivity, nursing home care costs, and nonprescription drugs are not included. Each year there are over 300,000 diabetes-related hospitalizations in California, at an annual cost of $3.4 billion[7].

Contributing factors to a growing trend

The two major forms of diabetes are called type 1 and type 2, and both cause similar kinds of complications. Gestational Diabetes Mellitus (GDM) is also an important form of diabetes with onset or first recognition during pregnancy. GDM complicates approximately 7 percent of all pregnancies in the United States and is a risk factor for later development of type 2 diabetes[8]. Type 1 diabetes is caused by a failure of the pancreas to make insulin due to autoimmune destruction of the insulin producing

beta cells and accounts for about 5-10 percent of all cases[9]. Those with type 1 diabetes must take insulin to stay alive and perform multiple daily blood glucose (sugar) tests to assist with treatment decisions. Type 2 diabetes, due to insulin resistance and relative insulin deficiency, accounts for 90-95 percent of all cases. Risk increases with age, obesity and a sedentary lifestyle. Weight reduction and physical activity have been shown to reduce the risk of developing type 2 diabetes and to slow its progression. But obesity, one of the leading health indicators for the Healthy People 2010 initiative, is a significant problem in our country, with over half of the adult population considered overweight or obese[10]. In 2000, 15 percent of children under age 19 were considered obese, compared to 4-6 percent in 1974[11].

"Everyday we see the devastation that diabetes causes. But others may not see it. Diabetes is not contagious nor is it always visible. It's hard to convince people that it's serious, but it is."

As a result of this increase in obesity, more children and adolescents are developing type 2 diabetes—a form of diabetes that has until recently been diagnosed primarily in adults. Some recent reports indicate that 8–45 percent of children with newly diagnosed diabetes have type 2 diabetes[12]. These children are typically overweight, 10 years of age or older, a member of a high-risk ethnic group, and have a family history of type 2 diabetes.

Diabetes affects some populations disproportionately, including African Americans, American Indians/ Alaskan Natives, Asian and Pacific Islanders, Hispanics/Latinos, and the elderly. With an aging population and over half of the state composed of high-risk ethnic populations, it is not surprising that diabetes is increasing rapidly in California.

Another trend is the growing population of people with Impaired Glucose Tolerance or Impaired Fasting Glucose, now called "pre-diabetes,"who have higher than normal blood glucose (sugar) levels and are expected to be diagnosed with type 2 diabetes within a decade. After finding that 16 million Americans between 40 and 74 years old have this newly defined type 2 diabetes precursor, federal health officials and the American Diabetes Association recently issued guidelines

recommending increased screening for pre-diabetes[13]. Pre-diabetes can lead to type 2 diabetes and increase the risk of developing heart disease by 50 percent. However, lifestyle changes such as moderate physical activity and a more nutritious diet, can lead to moderate weight loss and may delay or prevent the onset of type 2 diabetes, if the condition is detected early.

Gaps in diabetes care

Effective screening and treatment methods exist for diabetes, yet many people do not receive appropriate care. In an effort to improve the quality of medical care and heighten the level of awareness regarding basic health care requirements for those with diabetes, the Diabetes Coalition of California, in collaboration with the California Diabetes Prevention and Control Program, issued Basic Guidelines for Diabetes Care (www.caldiabetes.org). These evidence-based guidelines, which serve as a framework for the development of diabetes care programs and strategies, are aimed at reducing the personal and societal impact of diabetes. There is still a gap nonetheless, between what is known to be effective in diabetes care, and the care that is actually provided.

The reasons for this gap are multiple and complex. They include: a fragmented and confusing health care delivery system; increasing numbers of uninsured and underinsured Californians; limited public resources for diabetes treatment and prevention; overburdened primary care physicians who are expected to deliver the majority of clinical management; and lack of incentives to coordinate and improve systems of care. Complicating the issue further is an increasingly obese and sedentary population, creating more stress on a system already failing to deliver effective care in many instances.

In addition to challenges within the health care system, providers are now struggling to assist and encourage populations to improve their lifestyle choices. Our societal influences do not support healthy lifestyle changes. Many people work long hours in sedentary jobs, live in areas that have limited physical activity options, are surrounded by unhealthy food choices, such as an overabundance of junk food and fast food restaurants, and face a growing acceptance of increased portion sizes. Overcoming these environmental barriers requires consistent commitment and diligence, as well as valuable time and resources.

California's Plan for Diabetes: 2003-2007

Because diabetes is a large and complicated health problem, there is a need for a comprehensive action plan that promotes and advocates for coordinated diabetes care in California. Many organizations in California are already doing excellent work in diabetes, yet these efforts frequently occur in isolation, with little interaction between other organizations that are doing similar or complementary work. California's Plan for Diabetes provides a framework for these organizations to mobilize around a single set of common goals: to increase access to care, improve the quality of care, enhance primary prevention and guide public policy for diabetes.

"It is our duty to provide hope, even though at times, diabetes seems hopeless."

Plan roadmap

Just as diabetes affects multiple populations in myriad ways, there are many interventions that can achieve improved health in those with, or at risk for, diabetes. The Plan does not outline every possible solution, but primarily focuses on those interventions that are practical, achievable, and realistic in the current California health care environment.

While all populations are considered for interventions, this Plan gives special attention to high-risk ethnic groups, overweight children and adolescents, older adults and the economically disadvantaged. The Plan is grounded in current evidence when proposing specific interventions, and proposes measurable objectives and outcomes that can be expected upon implementation.

This report is written for many types of entities, ranging from local community based organizations (CBOs) to governmental agencies. The important aim of this Plan is the coordination of diabetes work among organizations, providing focus and promoting collaboration.

The goals were established by a task force composed of key agencies and organizations across the state that have identified diabetes as a clinical or community priority. Community input was gathered through a series

of meetings statewide, where local organizations provided feedback on the Plan. In addition, the Plan was available on the Internet for public comment. The goals defined through these meetings were:

- **Access:** Identify and reach a larger number of Californians with, or at risk for, diabetes
- **Quality Care:** Promote guidelines and strategies to improve care delivery
- **Primary Prevention:** Increase awareness, knowledge and action regarding diabetes prevention
- **Policy:** Guide public policy related to diabetes

Each goal is outlined below, including priority areas, proposed interventions, and the change that is expected upon implementation of interventions. A coordinated and integrated approach to improving diabetes care in California through the year 2007 is possible, and this Plan serves as a guide for all to accomplish that objective.

Data collection and measurement

For most organizations, collecting and analyzing data for diabetes activities is an ongoing challenge. It is understood that many organizations in the state do not have a sophisticated data collection system, but this should not preclude them from participating in outcomes measurement. An infrastructure for collecting, analyzing, and distributing accurate data to relevant stakeholders is absolutely essential in order to assess progress and make informed programmatic decisions.

The California Diabetes Prevention and Control Program has created a reporting tool to help meet requirements in providing data to the Centers for Disease Control and Prevention. The California Diabetes Prevention and Control Program gathers information across six key measures (National Diabetes Objectives): foot exams, eye exams, influenza and pneumococcal vaccines, A1C tests, reduction of health disparities through implementation of programs for high-risk populations, and implementation of health improvement programs for persons with diabetes. To assist organizations, the California Diabetes Prevention and Control Program is offering its reporting tool (available at www.cal-diabetes.org) to facilitate the process. This tool can be used to report data on all six key measures. Patient identifiers will not be collected and if desired, the submitting organization's identity will not be disclosed. Data can of course be collected in any clinical or program area, but the tool focuses on the six key measures. We encourage you to report your data to the California Diabetes Prevention and Control Program so it can be used in measuring California's progress in meeting the National Diabetes Objectives.

Using the Plan

In order to accommodate the varying resources and needs of organizations, the Plan offers a host of areas for potential focus, as well as numerous proposed interventions to begin or continue work in those areas. It is understood that many entities are already focusing their efforts in the defined priority areas, and instead of taking on new program development, will opt for more guidance in aligning their work with other California organizations.

This Plan was crafted with the understanding that most organizations have limited time and resources. It is recommended that you follow the next seven steps to maximize your organization's efforts in incorporating the Plan.

1. **Review your organization's mission statement.** Define or reconfirm which areas are of the highest priority to your own organization.
2. **Identify those goals from the Plan that are most in alignment** with your organization's mission. Within the relevant goals, select priority areas for your organization, assigning timeframes to specific activities for the years 2003-2007.
3. **Contact other community organizations** in order to review and discuss their own priority areas. Create a community-wide plan to ensure that key priority areas are covered and duplication of effort is reduced. Then institute a communication mechanism for updating all organizations on progress.
4. **Select recommended interventions from the Plan** that support priority areas. Select those that are realistic and achievable for your organization. Consider collaborations with other organizations to utilize outside resources and expertise.
5. **Identify leadership and intended beneficiaries in your community.** Create and implement interventions that consider the needs of your community, as well as utilize local leadership to further goals.
6. **Create infrastructure for measurement and data collection.** Using an internal data collection system, and/or the tool provided by California Diabetes Prevention and Control Program, collect appropriate data, collate it, and share the data with the California Diabetes Prevention and Control Program and other partners.
7. **Revisit progress on priority areas periodically and monitor outcomes,** both internally, and with other organizations in the community. Stay connected to community resources to ensure delivering needed services.

PLAN GOALS

Goal 1: Increase access to care

Critical tasks

For myriad reasons, many people with, and at risk for, diabetes do not receive appropriate care. This is particularly true in high-risk ethnic populations, children and adolescents, pregnant women, older adults and the economically disadvantaged. The table below summarizes the priority areas and recommended interventions to identify and reach a larger number of Californians with, and at risk for, diabetes.

Evidence of Change

Successful implementation of this goal will lead to increased access to care for people with, or at risk for, diabetes and work towards the elimination of disparities in health care. More Californians with, or at risk for, diabetes will be identified, and gain access to appropriate screening, treatment and education. As a result, fewer complications will result from inconsistent self-management, and undiagnosed and under-treated diabetes.

To measure these important changes use data sources such as: Behavioral Risk Factor Surveillance Survey (BRFSS); California Health Interview Survey (CHIS); California Cooperative Health Care Reporting Initiative (CCHRI); Bureau of Primary Health Care (BPHC) Health Disparities Collaborative; U.S./Mexico Border Diabetes Project; Medicare/MediCal; and local county data.

"We know that people with diabetes do best with continuous care, but if they only have seasonal health coverage, the continuity of care is broken."

PRIORITY AREAS	RECOMMENDED INTERVENTIONS	EXPECTED OUTCOMES
1.A Identify specific populations within your own community or organization with increased diabetes prevalence or high-risk, and either poor or no access to care.	▪ Use existing local and California data (i.e. California Diabetes Prevention and Control Program County Fact Sheets) to find underserved populations with, and at risk for, diabetes. ▪ Begin process for collecting data for diabetes if no local data exists.	▪ Increased use of local and state data to identify underserved populations. ▪ Increased number of organizations collecting data.
1.B Promote **better alignment of services** to needs, at both local and state levels.	▪ Perform community assessment (e.g. www.diabetestodayntc.org) to determine existing services and gaps in diabetes prevention and treatment to clearly define population needs. Gaps may include discontinuity of care, lack of culturally appropriate services, transportation/mobility barriers, and lack of services for high-risk populations. ▪ Create plan for addressing gaps using collaborative approach and working with partners to prioritize and fulfill remaining needs. ▪ Encourage use of self-management tools, i.e., Diabetes Health Record card (www.caldiabetes.org) for patients to track their own medical care. ▪ Create mechanisms for doctors to transfer charts when patients change care provider. ▪ Create registry that tracks care when patients change plan or site of care. ▪ Create services that are culturally appropriate.	▪ Community assessments are conducted, existing services, needs and gaps are identified. ▪ Increased number of new and maintained collaborative partnerships established with community, state and national programs aimed at reducing health disparities for high-risk diabetes populations. ▪ Increased use of self-management tools such as the Diabetes Health Record card. ▪ Chart transfer mechanisms for providers are created. ▪ Tracking registries are developed. ▪ Increased availability of culturally appropriate services. ▪ Programs throughout California plan and implement more targeted and effective programs, based on the needs and populations identified.
1.C Promote broad reaching access to **diabetes services and tests** through CBOs, health care facilities, social services and community health workers.	▪ Educate clinicians and health care personnel about diabetes risk factors, prevention, diagnosis and treatment. ▪ Promote community health workers participation in diabetes prevention and treatment programs. ▪ Publicize when, where and how to access diabetes services.	▪ Increased number of clinicians and health care personnel educated. ▪ Increased number of community health workers recruited, hired and trained. ▪ Increased number of people can effectively navigate through health care systems.

Table 1. Increasing Access to Care

Goal 2: Improve quality of care

Critical tasks

Although evidence demonstrates that there are effective means of delivering appropriate diabetes interventions, many providers and patients are unaware of them. These missed opportunities can be due to fragmented health care systems, inadequate provider and patient training, or simply to the choices of providers and patients not to adhere to the most effective treatment plans. The table below outlines the priority areas in implementing guidelines and strategies to improve care delivery, with recommended interventions for each area. The table is separated into three categories of interventions: system, provider and patient.

Evidence of Change

Successful implementation of these interventions will result in increased system, provider and patient support for early diagnosis and coordinated care delivery strategies for diabetes care that match the cultural needs of the population. There will be greater adoption of team-based approaches in clinical offices that use care guidelines, including the use of self-management training, and better integration of community resources as part of a total system of care. Widespread use of coordinated care models will result in more patients receiving effective care.

To measure these important changes use data sources such as: BRFSS; CHIS; CCHRI; BPHC Health Disparities Collaborative; U.S./Mexico Border Diabetes Project; Medicare/MediCal; and local county data.

"Developing treatment guidelines was key. We've done that. Now we've got to use them in health systems to create change."

PRIORITY AREAS	RECOMMENDED INTERVENTIONS	EXPECTED OUTCOMES
System interventions: **2.A** Evaluate, critique and disseminate **coordinated delivery models** for common California systems of care, such as Individual Practice Associations (IPAs), Preferred Provider Organizations (PPOs), large medical groups, and community clinics.	▪ Conduct projects to evaluate effectiveness of coordinated delivery models of care. ▪ Create common measures across state to allow cross-sectional and longitudinal evaluations of coordinated delivery models of care. ▪ Develop and support community collaboratives to train and encourage providers to use coordinated delivery models of care. ▪ Research, catalog and share information about existing models of coordinated care via web sites, community meetings and presentations. (i.e. www.qualityhealth care.org and www.healthdisparities.net). ▪ Conduct training and ongoing education on effective coordinated care delivery models for health care professionals. ▪ Work with academic institutions to integrate effective coordinated care delivery models as a component of their training curricula. ▪ Develop a mechanism to coordinate care among providers when patients change medical providers.	▪ Evaluation projects conducted for coordinated delivery models of care. ▪ Increased number of programs using coordinated delivery models of care. ▪ Increased number of providers aware of coordinated care delivery models through web sites, community meetings and presentations attended. ▪ Increased number of trainings conducted for health care professionals on coordinated care delivery models. ▪ Increased number of academic institutions incorporating training on coordinated care delivery models in curricula. ▪ Mechanism developed for care coordination among providers. ▪ Increased number of people with diabetes receiving recommended A1C tests, eye exams, foot exams, influenza and pneumococcal vaccines.
Provider interventions: **2.B** Promote and support earlier and more frequent **diabetes risk assessment and diagnostic testing.**	▪ Promote the importance of diabetes risk assessment and screening/diagnostic testing in high-risk groups such as ethnic populations, the elderly, pregnant women, school age children and those who are overweight or obese. ▪ Promote the use of the American Diabetes Association's Risk Test (a paper risk assessment tool) to identify high-risk individuals (www.diabetes.org). Persons identified to be at high-risk should be referred for diagnostic testing. ▪ Use alternate venues such as health fairs, schools and work sites to identify persons at risk for diabetes (Note: organizations using finger stick testing as a screening method must do so with a Clinical Laboratory Improvement Amendments (CLIA) license, www.cms.hhs.gov/clia). Those identified to be at risk should be referred for diagnostic testing. ▪ Conduct and track diabetes screening/ diagnostic testing within health care delivery systems for those 45 years or older. For those at high-risk, screening should be done more frequently or at an earlier age.	▪ Increased number of people whose risk factors are assessed. ▪ Increased number of people are referred for diagnostic testing. ▪ Increased frequency of diagnostic testing for people at high-risk and 45 years or older. *(continued on next page)*

Table 2. Improving Quality of Care

PRIORITY AREAS	RECOMMENDED INTERVENTIONS	EXPECTED OUTCOMES
2.C Identify and implement model **strategies to address gaps in quality of care.** Gaps may include lack of cultural competency, clinical knowledge, or continuity of care.	▪ Recruit and train culturally competent health care professionals. ▪ Promote the use of clinical practice guidelines and education materials by providers in high-need areas. Combine with guideline training for providers as necessary, to increase knowledge of the essential diabetes tests and exams. ▪ Conduct trainings with providers on coordination of care strategies throughout health care systems. ▪ Link to Integrated Health Care Association's (IHA) Pay-for-Performance Initiative to promote diabetes tests/exams (www.iha.org).	▪ Increased number of culturally competent health care professionals. ▪ Increased number of providers trained and using clinical practice guidelines. ▪ Increased number of providers trained and using coordinated care delivery models. ▪ Increased number of providers receiving compensation for meeting diabetes performance measures. ▪ Increased number of persons with diabetes receiving recommended A1C tests, eye exams, foot exams, influenza and pneumococcal vaccines.
2.D Promote a **team-based approach** to diabetes care delivery that includes: ▪ People with diabetes and their families ▪ Health care administrators ▪ Health care providers ▪ Public health educators ▪ Community health workers ▪ School personnel	▪ Work with health plans, provider groups and other health delivery systems to deliver messages and tools to enhance team-based care and to promote appropriate testing and treatment. ▪ Utilize nurse educators based at schools or school districts and community health workers to link individuals to health care systems. ▪ Work with community groups, community health workers, school personnel, people with diabetes and their families to understand the team concept and their role on the team.	▪ Increased number of health care delivery systems using a team-based approach to diabetes care. ▪ Increased number of nurse educators and community health workers linking individuals to health care systems and engaged with the health care team. ▪ Increased number of people with diabetes receiving recommended A1C tests, eye exams, foot exams, influenza and pneumococcal vaccines.
Patient interventions: **2.E Empower people with diabetes** to participate actively in their care and communicate effectively with their health care team.	▪ Encourage patients to use self-management tools, i.e. Diabetes Health Record card (www.caldiabetes.org), to improve communication with health care providers during clinical encounters. ▪ Distribute culturally specific educational materials at appropriate literacy levels about diabetes self-management. ▪ Organize consumer groups consisting of people with diabetes who will promote principles of active self-care to others with diabetes, i.e. Diabetes Consumer Action Groups (www.caldiabetes.org). ▪ Utilize non-traditional sites such as schools, work sites and faith-based organizations to promote active self-management.	▪ Increased use of self-management tools such as the Diabetes Health Record card. ▪ Increased use of culturally and linguistically appropriate educational materials. ▪ Increased number of patient trainings on self-management. ▪ Increased number of consumer groups promoting principles of active self-management. ▪ Increased number of non-medical sites promoting self-management. ▪ Increased number of people with diabetes receiving recommended A1C tests, eye exams, foot exams, influenza and pneumococcal vaccines.

Goal 3: Promote primary prevention

Critical tasks

With diabetes rates rapidly increasing, a surge in obesity, and the recent acknowledgement of pre-diabetes as a health priority, there is a need for targeted primary prevention efforts. The table below summarizes priority areas in increasing knowledge, awareness and action around type 2 diabetes prevention, with recommended interventions for each area.

Evidence of Change

Successful implementation of these interventions will result in messages being broadly disseminated that describe how to prevent type 2 diabetes. There will be increased awareness of diabetes prevention and risk factors, in particular the link between obesity and type 2 diabetes. Awareness will also increase around the steps needed to prevent type 2 diabetes, particularly among children and adolescents, their parents and overweight individuals. Greater awareness among providers will lead to clear and consistent prevention messages in the clinical setting and the community. Greater participation among community organizations will encourage local policies that recognize risk factors for type 2 diabetes, support healthy food choices and provide physical activity programs in schools and communities.

To measure these important changes use data sources such as BRFSS and CHIS. In addition, track media messages and campaigns, peer educators' activities, primary prevention methods, and policy changes to improve healthy food consumption and physical activity programs.

"There needs to be a paradigm shift where healthy habits are rewarded in our health systems instead of reimbursements that only pay once someone is sick."

PRIORITY AREAS	RECOMMENDED INTERVENTIONS	EXPECTED OUTCOMES
3.A Design/identify and implement diabetes prevention activities that focus on the **link between obesity and diabetes,** particularly targeting children and overweight, high-risk adults.	▪ Form partnerships to establish new or utilize existing programs that promote wellness, physical activity, weight control and healthy eating for people at risk for chronic diseases including type 2 diabetes. Encourage use of these programs at work sites, schools, community centers, etc. ▪ Utilize general and ethnic media as well as community resources to present messages to the public about diabetes risk factors and prevention. ▪ Develop talking points for teachers, clergy and parents to address issues of lifestyle modification, weight management, healthy eating and physical activity.	▪ Increased number of partnerships formed to address chronic disease/type 2 diabetes prevention. ▪ Increased media coverage about type 2 diabetes prevention and its link with obesity. ▪ Talking points developed and distributed on lifestyle modification, weight management, healthy eating and physical activity.
3.B Educate providers to adopt primary prevention practices with high-risk individuals.	▪ Work with partner organizations involved in nutrition and physical activity to promote simple, consistent messages that providers can use with high-risk patients and families. Incorporate behavior change methodology into messages. ▪ Find community provider champions to serve as messengers; support through provision of easy-to-use tools (i.e. talking points for provider-patient discussions about overweight, sedentary lifestyle, and nutrition). ▪ Develop and support diabetes prevention collaboratives between communities and health care delivery systems.	▪ Increased number of projects implemented for persons at risk for diabetes that are aimed at lifestyle modification, promotion of wellness, physical activity, healthy nutrition and weight management. ▪ Increased number of provider champions and easy-to-use tools. ▪ Increased number of diabetes prevention collaboratives.
3.C Change **community environment** to support and promote primary prevention of type 2 diabetes.	▪ Participate in policy changes and efforts to improve healthy food consumption and physical activity programs in schools and communities. ▪ Form partnerships with local agencies to assess community environment and prioritize changes needed to support healthy lifestyles.	▪ Increased number of successful policies made to support healthy food choices and physical activity programs in schools and communities. ▪ Increased number of local partnerships created encouraging community change to support healthy lifestyles. ▪ Increased number of choices for physical activity and healthy food in neighborhoods, schools and work sites.

Table 3. Primary Prevention

Goal 4: Guide public policy

Critical tasks

Effective diabetes prevention and treatment requires a shift in policies that support population based improvements. Scientific advances that result in improved treatment methods and cures require policies that further these discoveries. The table below identifies the priority areas in influencing public policy around diabetes, with recommended interventions for each area.

Evidence of Change

Successful implementation of these interventions will result in sustained changes that support appropriate diabetes prevention and treatment and discoveries that will lead to a cure.

To measure these important changes use data sources such as BRFSS and CHIS. In addition, track enactment of legislation or policies that expand access to self-management training, funding, and research.

PRIORITY AREAS	RECOMMENDED INTERVENTIONS	EXPECTED OUTCOMES
4.A Enhance **legislative and regulatory advocacy** at state and at local levels.	▪ Collaborate locally to identify high-priority community issues and advocate for targeted solutions. ▪ Target specific legislators and identify specific action steps for policy interventions. ▪ Elicit testimonials, patient stories, and case studies from organizations, and share with policy-making bodies/committees. ▪ Develop talking points for people affected by diabetes and support advocacy training in the community. ▪ Request town hall meetings with elected officials for implementing priority areas. ▪ Use the Plan as a communication tool with legislators and other key government leaders.	▪ Increased number of communities that have action plans to address legislation and policy issues. ▪ Increased contact with policy makers and legislators. ▪ Increased number of people equipped to testify. ▪ Appropriate legislation and policies passed and implemented. ▪ Increased number of legislators who receive and acknowledge the Plan.
4.B Review, evaluate, and report **cost effectiveness/cost savings** associated with effective diabetes prevention and treatment interventions.	▪ Review existing data on cost effectiveness/cost savings. ▪ Analyze data on diabetes costs using appropriate methodologies. ▪ Disseminate diabetes cost information to legislators and policy makers.	▪ More policies will be implemented to support effective prevention/treatment interventions that are cost effective.
4.C Convey the **impact of diabetes services,** including self-management training, and primary prevention to legislators and policy makers.	▪ Identify existing evidence for effective diabetes self-management training and conduct additional outcomes research to prove the effectiveness of diabetes self-management training. ▪ Identify existing evidence for primary prevention interventions and conduct additional research to test effectiveness of interventions and facilitate their implementation. ▪ Request town hall meetings with elected officials to develop strategies for improving federal and state reimbursement for diabetes self-management training and prevention.	▪ Increased evidence for effective diabetes self-management training. ▪ Increased evidence for effective primary prevention interventions. ▪ Increased reimbursement for diabetes self-management training. ▪ Funding established for methods of primary prevention.
4.D Promote increased **funding for diabetes research and programs.**	▪ Advocate for funding of research to cure type 1 diabetes. ▪ Advocate for funding of statewide and local diabetes treatment and prevention programs. ▪ Formulate budget requests linked to specific tasks and expected outcomes from the Plan.	▪ Increased funding for diabetes research and programs. ▪ Increased variety of funding streams that support diabetes prevention and treatment programs.

Table 4. Guiding Public Policy

Call to Action

California's Plan for Diabetes provides a framework for organizations to mobilize around a single set of common goals: increase access to care, improve the quality of care, enhance primary prevention and guide public policy for diabetes. It will take your active involvement to assure that your community is addressing priority areas in diabetes. Join us in action by taking the following steps:

1. Make a commitment and become a partner with others in your community and with the California Diabetes Prevention and Control Program in addressing diabetes.

"Numbers will give us power to prove that we need to have programs in specific areas. We need to all work on collecting data."

2. Conduct interventions that best meet the needs of your community. Use the Plan to guide intervention choices.
3. Communicate your work in diabetes by sharing your challenges and successes with the California Diabetes Prevention and Control Program and its partners.
4. Share data with the California Diabetes Prevention and Control Program to better monitor diabetes in the state.
5. Foster viable collaborations and partnerships at all levels.

We believe that your action in addressing diabetes for the next five years will make a notable difference in the lives of those with, or at risk for, diabetes in California.

Conclusion

An idea without a plan is a dream, but an idea with a plan promotes action. California's Plan for Diabetes is the basis for organizations throughout the state to coordinate their efforts in diabetes around common goals. Diabetes is a huge and growing problem that cannot be solved by a single group. The Plan should help organizations and communities identify needs, set priorities, and develop objectives that can be accomplished. The sum of these coordinated parts will add up to better results in addressing diabetes in California.

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[13] Data from American Diabetes Association: *Pre-diabetes.* [http://www.diabetes.org/main/info/pre-diabetes.jsp]

Glossary

Coordinated care delivery model: A model of care that integrates different components of the health care system, such as the providers, community, and the patient, into an integrated method of monitoring and managing patient care. One of the most well known examples is the Chronic Care Model developed by Ed Wagner and colleagues. Additional information about the Chronic Care Model is available at http://www.improvingchroniccare.org/change/model/components.html.

Behavioral Risk Factor Surveillance System (BRFSS): In California, this state-administered telephone survey is part of the surveillance effort conducted by the California Department of Health Services and the Public Health Institute in cooperation with the Centers for Disease Control and Prevention. The emphasis of this survey is on health-related behaviors in the adult population with a specific focus on behaviors related to disease and injury. The survey has been ongoing in California since January 1984. The annual sample size for this survey is approximately 4,000 interviews.

California Health Interview Survey (CHIS): CHIS is the largest state health survey conducted in the United States. The first survey—CHIS 2001—collected information from 73,821 individuals: 55,428 adults, 5,801 adolescents and 12,592 parents about a child. CHIS collects information on important health conditions such as diabetes, cancer, and asthma. CHIS will benefit the health and health care needs of California's ethnically diverse population since it is enhanced by cultural adaptation and translation in six languages: English, Spanish, Chinese, Vietnamese, Korean and Khmer (Cambodian) and includes large samples of African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders and Latinos. CHIS will survey the state's population every two years.

Gestational Diabetes Mellitus (GDM): GDM is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. The definition applies whether insulin or diet-only modification is used for treatment, and whether or not the condition persists after pregnancy. It does not exclude the possibility that unrecognized glucose intolerance may have pre-existed or may have begun during pregnancy.

Healthy People 2010: A set of national health objectives designed to identify the most significant preventable threats to health, and to establish national goals to reduce these threats. The objectives are administered through the U.S. Department of Health and Human Services and can be found at http://www.health.gov/healthypeople/default.htm.

Health Plan Employer Data and Information Set (HEDIS): HEDIS is a set of standardized performance measures designed to ensure that purchasers and consumers have the information they need to reliably compare the performance of managed health care plans. The performance measures in HEDIS are related to many significant public health issues such as diabetes, cancer, heart disease, asthma, and smoking. HEDIS also includes a standardized survey of consumers' experiences that evaluates plan performance in areas such as customer service, access to care and claims processing. HEDIS is sponsored, supported and maintained by the National Committee for Quality Assurance (NCQA).

Impaired Fasting Glucose (IFG): IFG is also known as "pre-diabetes." IFG occurs when the fasting plasma glucose value is 110-125 mg/dL. These glucose values are greater than the level considered normal but less than the level (126 mg/dL) that is diagnostic of diabetes.

Impaired Glucose Tolerance (IGT): IGT is also known as "pre-diabetes." IGT occurs when the blood glucose level is higher than normal, but not high enough to be classified as diabetes. IGT is indicated by a blood glucose level of 140-199 mg/dl two hours after drinking the glucose solution in the oral glucose tolerance test (OGTT).

Individual Practice Association (IPA): A network of individual physicians or physicians in smaller groups. IPAs contract with individual physicians who see HMO members as well as patients covered by other types of health insurance in their own private offices. Physicians in an IPA are paid on either a capitation or a modified fee-for-service basis.

National Diabetes Objectives: In 1999, the Division of Diabetes Translation (DDT) at the Centers for Disease Control and Prevention, established the following seven DDT National Objectives as priority areas for the national diabetes program: (1) establish measurement procedures to track program success in reaching National Objectives; (2) demonstrate success in achieving an increase in the percentage of persons with diabetes in your state or jurisdiction who receive the recommended foot exams; (3) demonstrate success in achieving an increase in the percentage of persons with diabetes in your state or jurisdiction who receive the recommended eye exams; (4) demonstrate success in achieving an increase in the percentage of persons with diabetes in your state or jurisdiction who receive the recommended influenza and pneumococcal vaccines; (5) demonstrate success in achieving an increase in the percentage of persons with diabetes in your state or jurisdiction who receive the recommended A1C tests; (6) demonstrate success in reducing health disparities for high risk populations and; (7) demonstrate success in establishing useful programs for the promotion of wellness, physical activity, weight and blood pressure control, and smoking cessation for persons with diabetes.

Obesity: Obesity is defined as an excessively high amount of body fat or adipose tissue in relation to lean body mass. The amount of body fat (or adiposity) includes concern for both the distribution of fat throughout the body and the size of the adipose tissue depots. Individuals with a Body Mass Index (BMI) of 30 or more are considered obese. http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm

Overweight: Overweight refers to increased body weight in relation to height, when compared to some standard of acceptable or desirable weight. Individuals with a BMI of 25 to 29.9 are considered overweight. http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm

Preferred Provider Organization (PPO): Some combination of hospitals and physicians agree to provide health care services to a group of people, perhaps under contract with a private insurer. The services may be furnished at discounted rates. Patients may incur expenses for covered services they receive outside the PPO, if the charge from the non-PPO provider exceeds the PPO reimbursement rate.

Pre-diabetes: Pre-diabetes is the state that occurs when a person's blood glucose levels are higher than normal, but not high enough for a diagnosis of type 2 diabetes. This is also referred to as Impaired Glucose Tolerance or Impaired Fasting Glucose, depending upon whether an oral glucose tolerance test or a fasting blood glucose test was used. People with pre-diabetes have a 1 in 3 chance of developing type 2 diabetes within 10 years, but this can be minimized through healthy eating and physical activity.

Prevalence: The proportion of persons with a particular disease within a given population at a given time.

Primary Prevention: Include efforts that protect individuals against disease, and are aimed at keeping a population healthy.

Risk Assessment: A planned program to identify those at risk for a disease by assessing their risk factors. For diabetes, the American Diabetes Association has a Risk Test (a paper risk assessment tool) to identify high-risk individuals (www.diabetes.org). Persons identified to be at high-risk should be referred for diagnostic testing.

Screening/ Diagnostic Testing for Diabetes: Involves checking an individual's blood glucose level in a medical setting to confirm the presence or absence of diabetes. If using finger stick testing in a screening program, there must be a means of referring individuals with a positive test for follow-up care. Finger stick testing requires licensure for laboratory testing.

Secondary Prevention: Testing and treating people with an established disease in order to prevent recurrent events or disease progression.

Type 1 Diabetes: Type 1 diabetes, previously known as juvenile diabetes, is usually diagnosed in children and young adults. In type 1 diabetes, the body does not produce enough insulin due to autoimmune destruction of the insulin producing beta cells in the pancreas.

Type 2 Diabetes: Type 2 diabetes is a metabolic disorder resulting from the body's inability to make enough, or properly use, insulin. Type 2 diabetes is the most common form of diabetes.

Resources

The following resources may be useful to organizations seeking additional information about diabetes. Some of the resources also provide funding to selected agencies. Please contact the organization directly for additional information.

American Diabetes Association
www.diabetes.org

California Diabetes and Pregnancy Program
www.dhs.mch.ca.gov/programs.htm
www.llu.edu/llumc/sweetsuccess

"The landscape of diabetes is changing for the better. But we've got a long way to go and we must keep working at it. Every person is important."

California Diabetes Prevention and Control Program
www.caldiabetes.org

The California Endowment
www.calendow.org

California HealthCare Foundation
www.chcf.org

Centers for Disease Control and Prevention
www.cdc.gov/health/diabetes.htm

Health Disparities Collaborative
www.healthdisparities.net

Improving Chronic Illness Care Program
www.improvingchroniccare.org

Integrated Health Care Association
www.iha.org

Juvenile Diabetes Research Foundation
www.jdrf.org

National Committee for Quality Assurance
www.ncqa.org

National Diabetes Education Program
www.ndep.nih.gov

Robert Wood Johnson Foundation
www.rwjf.org

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Health Net
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We want to hear from you!

Tell us what you think of California's Plan for Diabetes. Check out our web-based reporting tool. Download valuable diabetes resources. Join our online mailing list.

www.caldiabetes.org

To gather additional input for the Plan, ten community meetings were held throughout California and a draft was posted on the California Diabetes Prevention and Control Program's web site. Common themes were included in the Plan from the following organizations:

Alameda Alliance for Health

Alameda County Public Health Department

American Association of Retired Persons (AARP)

Asian Pacific Health Care Venture

Aventis Pharmaceuticals

Blue Cross of California State Sponsored Programs

Brookside Community Health Center

Bristol Myers & Squibb

California Black Health Network

California Diabetes in Pregnancy Program

California Heart Disease and Stroke Prevention Program, Department of Health Services

California Hospital Medical Center

California Medical Association

Charles R. Drew University of Science and Medicine/University of California, Los Angeles

Children's Hospital Oakland

Community Health Partnership

County of San Diego

Diabetes Amputation Prevention Foundation

Diabetes Society of Sonoma County

Disetronic Medical Systems, Inc.

Doheny Retina Institute

Fullerton College Student/PUENTE

Gardner Family Health Network

Health Promotion and Binational/Border Health, Health Education Program

Health Trust

Hill Physicians Medical Group, Inc.

Homeys Youth Foundation - California Home Instruction Program for Preschool Youngsters

Juvenile Diabetes Research Foundation

Kaiser Permanente, Los Angeles

Kaiser Permanente, Northern California

Latino Community Diabetes Council

Los Angeles County Area Agency on Aging

Los Angeles County Department of Health Services

Los Angeles County DHS Children's Health Initiatives

Los Angeles County Office of Education

Los Angeles Metropolitan Medical Center

Los Angeles County + University of Southern California Health Care Network (LAC+USC Health Care Network)

Queen of Angels Hollywood Presbyterian Medical Center— Tenet Health System

National Asian Women's Health Organization (NAWHO)

Mini Pharmacy

Multicultural Area Health Education Center

Northern California Center for Wellbeing

Oakland Unified School District

Pajaro Valley Community Health Trust

Por La Vida

Project Concern International

Redwood Community Health Coalition

Sansum Medical Research Institute

Santa Clara County Chapter of American Association of Diabetes Educators (AADE)

Santa Clara County IPA

Santa Clara Valley Medical Center Diabetes Center

San Diego State University

San Francisco Department of Public Health

San Mateo Community Health Services

Sharp Health Care

Sonoma Valley Community Health Clinic

Southwest Community Health Center

Stanford Patient Education Research Center

Stanford University

St. Mary's Medical Center

St. Johns Health Center

St. Vincent Medical Center

St. Vincent Medical Center Educational Services

Summit Health Ministry

Sutter Health Family Practice Center

Therasense

The Children's Clinic

The Salvation Army

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Ventura County Medical Research Foundation

Ventura County Chronic Disease Prevention Partnership

Ventura County Public Health

California's Plan for Diabetes is evolving as we continue our work in diabetes. We invite you to participate in the implementation of the Plan and join the list of supporting organizations.

The Plan is available for download at www.caldiabetes.org. Continue to check the web site as updates to the Plan are posted.